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شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
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"PREPARATION OF INORGANIC CATALYSTS FOR THE PRODUCTION OF BIO-JET FUEL BY HYDROCRACKING OF JATROPHA OIL"

By

Sarah Hisham Hassan Hussein Fahmy

A Thesis Submitted to the
Faculty of Engineering at Cairo University
in Partial Fulfillment of the
Requirements for the Degree of
MASTER OF SCIENCE
In
Chemical Engineering

FACULTY OF ENGINEERING, CAIRO UNIVERSITY
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"PREPARATION OF INORGANIC CATALYSTS FOR THE PRODUCTION OF BIO-JET FUEL BY HYDROCRACKING OF JATROPHA OIL"

Key Words:

Biojet fuel; catalytic hydrocracking; inorganic catalyst; nonedible oils; Jatropha oil.

Summary:

Biofuels such as biodiesel and biojet fuel are important sources of renewable energy, which will in the near future, replace petroleum fuels. Biofuels in general, can be produced from several raw agriculture materials. Currently, the most important biofuel is biojet fuel, as a partial replacement of jet fuel of petroleum origin. The most promising method for biojet fuel manufacture is the catalytic hydrocracking of a low cost raw vegetable oil such as non-edible Jatropha Oil. The type of product and its quality depend on the process conditions such as reaction time, temperature and the catalyst type, form, and amount. Heterogeneous catalysts play an important role in this process. The present thesis aims at the selection and preparation of an economic inorganic catalyst. This will then be used in the production of biojet fuel by hydrocracking of Jatropha oil conforming to ASTM specifications.

Disclaimer

I hereby declare that this thesis is my own original work and that no part of it has been submitted for a degree qualification at any other university or institute.

I further declare that I have appropriately acknowledged all sources used and have cited them in the references section.

Name: Sarah Hisham Hassan Date:

Signature:

Dedication

I dedicate my thesis to my Mother, my father and to my husband "Ahmed".

Acknowledgments

I want to thank God for all blessings he gave to me and for giving me the power and time to complete this work.

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Table of Contents

List of Tables

List of Figures